

***Response to Arguments***

1. Applicant's arguments filed on 8/20/08 have been fully considered but they are not persuasive. The applicant argues that prior art of record does not teach "the signaling protocol comprising: a first parameter that indicates which of the plurality of communication modules are enabled for used in responding to a host command." The examiner respectfully disagrees because Ollis references does teach the signaling protocol that indicates the plurality of communication modules that are available to the user (see column 6 and lines 32-59).
2. The applicant argues that the second parameter is not taught by Vaisanen. The examiner respectfully disagrees. Vaisanen teaches that when both WLAN and Bluetooth communication modules are available, WLAN is preferred more than Bluetooth since the WLAN has more coverage. One of ordinary skill in the art would combine Vaisanen with Ollis references to e.g. have a signaling protocol for a user to access the available communication modules at vicinity when the user wants to transmit or receive and the system would prefer WLAN over Bluetooth communication modules when both are available to the user. Thus, the selection of WLAN is prioritized.
3. The applicant further argues that Phillips references does not remedy any of the deficiencies in which the system of Phillips is not performed based upon at least two parameters of a signaling protocol. The examiner believes that the argument is moot because the applicant does not claim that the system is performed based upon at least two parameters of a signaling protocol within the deficiencies. The introducing of Phillips is to show a system that is able to have multiple radio modules within one. Besides that the teaching of two parameters utilization has been taught by the combination of Vaisanen and Ollis as mentioned before.

4. Therefore, based on the foregoing reasons, the previous rejection stands.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 9-12, 18, 19, 21-25, 31-34, 38- 40, 41-43, 46, 47, 48, and 50-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ollis et al (US006999721B2) in view of Awater et al (US007046649B2) and Vaisanen et al (US006560443B1) in further view of Phillips et al (US006072994A, hereinafter “Phillips”)

Per claim 1, Ollis discloses a system for integrating a plurality of short-range communication protocols, comprising: a unified object transfer mechanism for enabling a enhanced host controller to share use of an RF transceiver between a plurality of communication modules using a plurality of short-range communications protocols (see column 3 and lines 45-63 and figure 1), a direct interface between the user and the multi-mode device and the device itself keeping a list of different wireless protocol link list (see figure 3-6, corresponding columns and lines number), a direct interface between the user and the multi mode device and the device itself keeping a list of different wireless protocol link list in which a host such as application layer for user to select and determine who to connect, the device would execute command from the user and establish connection according to user’s selection which indicate who to be connect first (see figure 3-6, column 7 and lines 14-column 8 and lines 2). For the plurality of communication modules shares one RF transceiver.

The examiner believes that Ollis should have such features since there is only one antenna shown in figure 1. For the sake of the argument, the examiner would like to introduce Awater reference. Awater teaches that a plurality of communication modules shares one RF transceiver (see figure 2). It is well known in the art to share one RF transceiver when there is more than one RF mode in a portable device. Such implementation is obvious to one ordinary skill in the art to maintain or reduce to size of the portable device (see abstract).

Combination of Ollis and Awater doesn't expressly teach that a priority order for send the host command is part of signal protocol. Vaisanen teaches that when both Bluetooth and WLAN enabled, the priority order of the second parameter may be WLAN first then Bluetooth (see column 5 and lines 17-26, indicated that WLAN is preferred). It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of Sainton with the combination of Ollis and Awater such that it would prevent damage to the wireless modules that share the same frequency spectrum.

The combination of preceding references does not teach a host entity configured to utilize a signaling protocol to control the operation of a plurality of communication modules in a device that share a common RF transceiver. Phillips teaches a programmable multifunction radio device (see figure 13 and item 106) that is able to control the operation of plurality of communication modules that share a common RF transceiver (see figure 13 and item 308, see abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the references to utilize a single hardware, transceiver to provide communication with multiple communication protocols.

Same arguments apply, mutatis mutandis, to independent claims 10, 20, 23, and 32.

Per claims 2 and 3, Ollis further teaches that the plurality of short-range communication protocols operation in same frequency area (see column 1 and lines 40-50, at least between Bluetooth and IEEE 892.11b standard in which utilize ISM band).

Same arguments apply, mutatis mutandis, to claims 11, 12, 24, 25, 33 and 34.

Per claim 9, Ollis further teaches that at least one signaling protocol for enabling the enhanced host controller to communication with at least one of the plurality of communication modules employing at least one of the plurality of short range communication protocols (see figure 3).

Same arguments apply, mutatis mutandis, to claims 19, and 31.

Per claim 18, Ollis further teaches that the device is one of a cellular phone laptop computer or a PDA (see figure 1).

Per claim 38, Ollis further teaches that the plurality of communication modules comprises at least three substantially concurrently operating communication modules (see figure 2 and item 212-214, column 7, lines 42-45).

Same arguments apply, mutatis mutandis, to claim 40 and 42.

Per claim 44, Ollis further teaches that the host command is received from a Bluetooth host (see figure 2 and item 204).

Per claim 46, Vaisanen further teaches that an enhanced host controller, wherein the enhanced host controller is configured to modify the host command to one or more commands suitable for use by one or more of the communication modules indicated by the first parameter based on the priority order indicated by the second parameter (see figure 1 and item 14, figure 3B, column 8 and lines 20-37, the selection of wireless modules between WLAN and Bluetooth are based on the availability and preferable choice).

Same arguments apply, mutatis mutandis, to claims 47, 48, 50-53.

Per claim 54 and 55, Ollis further teaches that user is able to select a wireless device with a corresponding wireless protocols based on a set of rules to make a determination (see column 3 and lines 55-63, column 7 and lines 39-42). Ollis does not teach the one of the rule would be the speed. One of ordinary skill in the art knows that WLAN (IEEE 802.11 standard) has higher data rate and power range than the Bluetooth. It would have been obvious to one of ordinary skill in the art to select a wireless protocol among a plurality of wireless protocols based on the data rate speed.

Same arguments apply, mutatis mutandis, to claims 56-63.

7. Claims 4-6, 13-17, 26-28, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ollis et al (US006999721B2), Awater et al (US007046649B2), Vaisanen et al (US006560443B1), and Phillips in view of applicant admitted prior art (hereinafter, APA).

Per claim 4-6, Ollis discloses an analogous art as recited in claims 1, 10, 20, 23 and 30. Ollis doesn't teach the plurality of short-range communication protocols including LEE communication protocol and RFID communication protocol. APA discloses the LEE allows Bluetooth devices to communicate with other devices with other devices that are developed for low-cost and low-power communications and various RFID tags have been developed to be compatible with Bluetooth that operates in the 2.4 GHz radio band (see page 2). It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of APA with Ollis's device such that it is easy for user to operate such multi wireless mode device without knowing all the short-range protocols.

Same arguments apply, mutatis mutandis, to claims 13-17, 26-28, and 35.

*Allowable Subject Matter*

8. Claims 45, 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUWEN PAN whose telephone number is (571)272-7855. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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